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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/522,554      | 03/10/2000  | Francis M. Rossi     | 16650016US01        | 5524             |

27194 7590 10/07/2002

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| EXAMINER |
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CEPERLEY, MARY

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| ART UNIT | PAPER NUMBER |
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1641

DATE MAILED: 10/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/522,554

Applicant(s)

ROSSI, FRANCIS M.

Examiner

Mary (Molly) E. Ceperley

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 September 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See the attached letter.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See the attached letter.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 13-20.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☒ Other: PTO-1449 filed 12 March 2002

Mary (Molly) E. Ceperley  
Primary Examiner  
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**1)** The amendment filed 15 September 2002 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance and will not be entered because:

- The proposed amendment is not deemed to place the application in better form for appeal by materially simplifying the issues for appeal.
- There is no convincing showing under 37 CFR 1.116(b) why the proposed amendment is necessary and was not earlier presented.
- The proposed amendment raises new issues that would require further consideration.

**2)** Applicants have not provided any reason for why the proposed narrowing of the claims to define the "affinity anchor molecule" as "an oligonucleotide" was necessary and was not earlier presented. Applicants have also not discussed how this limitation would further define the claimed invention over the prior art of record.

**3)** The proposed amendment to claim 13, which apparently was meant to specify that the "porous matrix overlays" the "electrode" rather than the "electrode array device" (see the paragraph directly below), is supported at page 6, lines 33-34 of the specification. However, the rejection of paragraph **4)a)** of the final rejection is still maintained for the reason that claim 13 is drawn to a "microarray device" comprising (a) "an electrode array device" **and** (b) "a plurality of molecules of interest" but the claim fails to specify the spatial and/or functional relationship of components (a) and (b) to each other. It is further noted that there is no requirement in claim 13 that the "affinity anchor molecules" be electrochemically immobilized on the "electrode array" (specification, page 11, lines 15 and 16); the "affinity anchor molecules" must only be "located within the porous matrix" (i.e. they may be simply dispersed within the matrix prior to the matrix being coated on the "electrode array device").

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4) The proposed amendment to claim 13 is confusing for the reason that it is unclear how the "porous matrix overlays the electrode array device" when the "electrode array device" itself is composed of "electrode cells", "**a porous matrix**", and "a plurality of affinity anchor molecules".

5) The request for reconsideration has been considered but does not overcome the prior art rejections of record. The following comments are provided in response to applicants' arguments filed in the response of <sup>1</sup>16 September 2002.

Applicants argue that Montgomery is not pertinent to the claimed invention for the reason that it is directed to an *in situ* electrochemical synthesis process to synthesize oligomers attached to an electrode and does not describe the instantly claimed hybridization of claim 17. While Montgomery discloses the positioning of oligonucleotides on an electrode, Montgomery also discloses the **use** of these immobilized oligonucleotides in a conventional hybridization, as claimed (see col. 25, lines 1-3). Steps (b)-(d) of instant claim 17 are directed to this conventional hybridization method as described by Montgomery. Step (a) of instant claim 17, "electrochemically synthesizing a plurality of different affinity anchor molecules at known location", is inclusive of the method described by Montgomery.

Applicants' argument that Hafeman et al does not disclose or suggest any portion of claim 13 is unconvincing. Applicants' statement that the "photoresponsive electrode" of Hafeman et al differs from the "electrochemistry system" of the instant invention does not take in to account the actual language and required components of instant claim 13. This claim does not recite an "electrochemistry system" but rather "an electrode array device" comprised of "electrode cells", a "porous matrix" and "affinity anchor molecules" defined as "oligonucleotides". Contrary to applicants' statement, this same combination of components is described by the reference. See Hafeman et al: the "electrode" of col. 2, line 31-43 containing multiple "sites"; the "porous film" on this surface described at col. 4, lines 20-30; bound nucleic acid sequences (oligonucleotides) on the device as described at col. 14, lines 46-61.


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6) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary E. (Molly) Ceperley whose telephone number is (703) 308-4239. The examiner can normally be reached from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le, can be reached at (703) 305-3399. The fax phone number for responses to be filed BEFORE final rejection is (703) 872-9306. The fax phone number for responses to be filed AFTER final rejection is (703) 872-9307.

Questions which are NOT RELATED TO THE EXAMINATION ON THE MERITS, should be directed to **TC 1600 CUSTOMER SERVICE** at **(703) 308-0198**. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

October 3, 2002

  
Mary E. (Molly) Ceperley  
Primary Examiner  
Art Unit 1641